

Consumer Monitors

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ACE Training

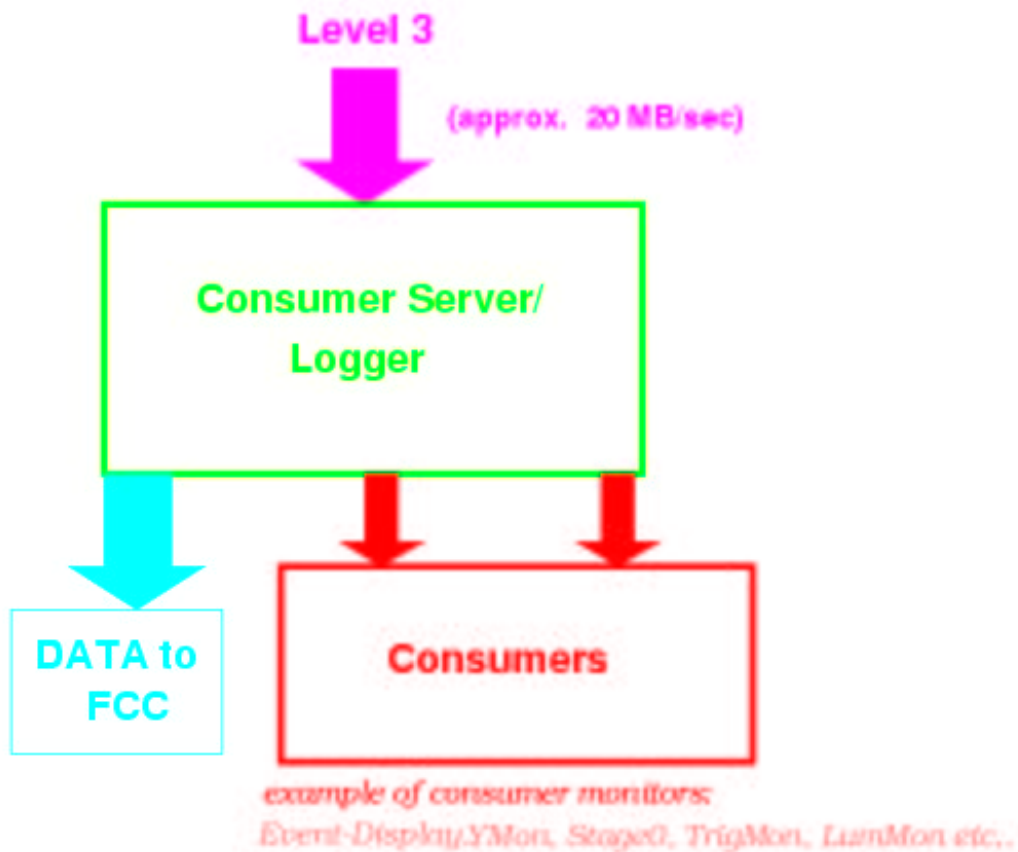
March 26, 2004 - Slides are copies of talk given
in November of 2003.

- **Consumer Framework Overview**
- **Consumer Online Monitor Operation at Control Room**

CDF RUN II Consumer Home Page

[http://www-cdfonline.fnal.gov
/consumer/home/consumer_home.html](http://www-cdfonline.fnal.gov/consumer/home/consumer_home.html)

How consumers get data?



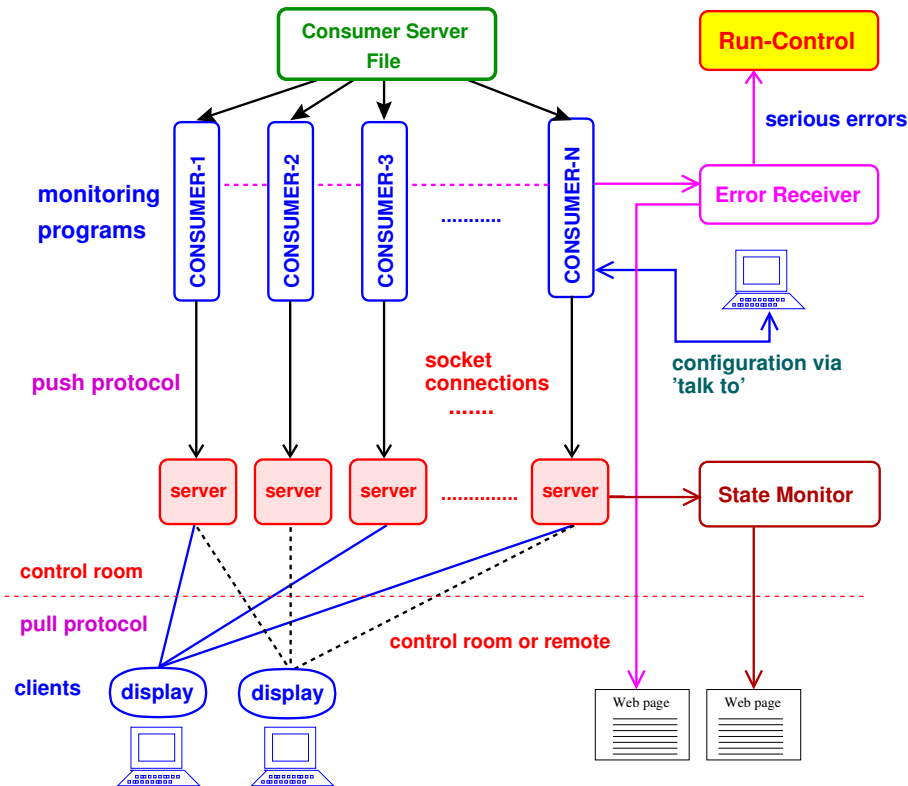
1. Level 3

- Final level of event filtering.

2. Consumer Server / Logger (CSL)

- Writes events passing Level 3 to disk.
- Serves events to consumers.

Consumer Framework Components



1. Consumer

- Analyse and monitor the event data from CSL.
- Send error messages to the error receiver.

2. Server

- Receives ROOT objects from consumer via socket.
- Reports the status of consumers to the state manager.

3. Display (HistoDisplay)

- Receives ROOT objects from server via socket.
- Updates objects (histograms, tables, etc.) on canvas.

CO Help Page

<http://www-cdfonline.fnal.gov/cohelp/cohelp.html>










The screenshot shows a Netscape browser window titled "Netscape: Consumer Operator Home Page". The address bar shows the URL <http://www-cdfonline.fnal.gov/cohelp/cohelp.html>. The browser interface includes a menu bar (File, Edit, View, Go, Communicator, Help), a bookmarks bar, and a toolbar with buttons for Back, Forward, Reload, Home, Search, Netscape, Print, Security, Shop, and Stop. Below the toolbar is a navigation bar with links for News, Downloads, Software, Hardware, Developers, Help, Search, and Shop.

The main content area has a light green background and features the CDF logo and the text "CO Information for Run II".

Things every CO should know:











The [old CO help page](#) still contains some information not included here. Additional information may be found on the [ACE help Page](#).

What CO's should do:

 Use the detector checklist to assist the SciCo in marking the GoodRun GUI	 Use the CDF consumer displays to monitor incoming data or to look at past runs
 Running/restarting the consumers.	 Compare slide show and other histograms to reference histograms
 Restart the consumer displays.	 USE THIS LINK TO SEE HOW YOU ARE SUPPOSED TO CHECK THE CALIBRATIONS!!!!
 Use this link for general information on DBANA	
 CDF electronics logbooks (e-logs)	 Use the Event Display

Consumer Monitors ([Home Page](#), [Status Page](#), [List of Monitors](#), [Cons. Endrun Summary](#))

[General considerations for viewing monitoring plots](#)

 YMon	 ObjectMon
 TrigMon	 BeamMon
 XMon	 SiliMon
 LumMon	 Stage0 (COT)
 EventDisplay	 SVTSPYMon
 SVXMon	 L3RegionalMon

FAQs

How to start consumer monitors

1. Go to /cdf/people1/cdfdaq/consumer_scripts directory on b0dap51
(Type : **cd consumer_scripts**)
2. Type : **./startMon.sh All** < *PartitionID* >
3. Server for each consumer start automatically.

```
LumMon@b0dap67:
ConsumerInput Begin processing 76500th record. Run 1370
21, Trigger 97087
ConsumerInput Begin processing 76600th record. Run 1370
21, Trigger 98304
ConsumerInput Begin processing 76700th record. Run 1370
21, Trigger 99263
ConsumerInput Begin processing 76800th record. Run 1370
21, Trigger 100349
ConsumerInput Begin processing 76900th record. Run 1370
21, Trigger 101222
ConsumerInput Begin processing 77000th record. Run 1370
21, Trigger 102133
ConsumerInput Begin processing 77100th record. Run 1370
21, Trigger 103043

TrngMon@b0dap52:
2100
ConsumerInput Begin processing 10800th record. Run 1370
21, Trigger 99699
2110
2120
***** PREFRED CALTRIG SUMMARY *****
----- number of caltrig errors 1825 after 1
0800 events
2130
2140
2150
2160
2170
2180
21

Stage0@b0dap69:
ConsumerInput Begin processing 17700th record. Run 1370
21, Trigger 73881
ConsumerInput Begin processing 17800th record. Run 1370
21, Trigger 78431
ConsumerInput Begin processing 17900th record. Run 1370
21, Trigger 82524
ConsumerInput Begin processing 18000th record. Run 1370
21, Trigger 87230
ConsumerInput Begin processing 18100th record. Run 1370
21, Trigger 91930
ConsumerInput Begin processing 18200th record. Run 1370
21, Trigger 96297
ConsumerInput Begin processing 18300th record. Run 1370
21, Trigger 100899

ObjectMon@b0dap56:
EDM=1.93568e-17 STRATEGY= 1
ERROR MATRIX ACCURATE
EXT PARAMETER FIRST STEP
NO. NAME VALUE ERROR SIZE
DERIVATIVE
1 p0 8.73992e+00 4.18089e-01 2.20820e
-03 1.48820e-08
ConsumerInput Begin processing 61400th record. Run 1370
21, Trigger 100090
ConsumerInput Begin processing 61500th record. Run 1370
21, Trigger 101274
ConsumerInput Begin processing 61600th record. Run 1370
21, Trigger 102540

@b0dap51:
Input Begin processing 3900th record. Run 13702
ger 15514
Input Begin processing 4000th record. Run 13702
ger 28058
Input Begin processing 4100th record. Run 13702
ger 40793
Input Begin processing 4200th record. Run 13702
ger 53568
Input Begin processing 4300th record. Run 13702
ger 66062
Input Begin processing 4400th record. Run 13702
ger 79317
Input Begin processing 4500th record. Run 13702
ger 92678

@b0dap70:
ALUATION, COMMENTS) VALUES (137020,'XMon',CONSUME
ICE, NEXTVAL, 0, 'UNDEFINED', 'None')
oot file /data/consumer/results/XMon/XMon137020
aved.
ing L1/L2 triggers from database, run 137021. D
L3 trigger paths and modules. Done.
Input Begin processing 11300th record. Run 1370
ger 8793
Input Begin processing 11400th record. Run 1370
ger 50811
Input Begin processing 11500th record. Run 1370
ger 99462
processed 200 events in run 137021.

XMon@b0dap66:
SIXDMon Silicon/S/B4/W3/L0/C1/S88() 14-Jan-200
6:54
run = 137021 event = 101869
-e Bad ADC Value: Negative pulse height: -5.
FIBs do not subtract pedestals in this run,
therefore this is either a bank unpacking erro
or the FIB channel with fib_id0 = 228 fib_id1
does not conform to the Run2V1_3BS ADC repres
on scheme.
SIXDMon Silicon/S/B4/W3/L0/C2/S32() 14-Jan-200
6:54
run = 137021 event = 101869

@b0dap67:
itor: event 351
v [SCALED_NOISE_LESS_THAN_0];
/home/cdfsoft/dist/releases/4.2.0/include/Trac
s/Correctors/DBCorrector.icc
: 171 on strip = 511 GlobalLibraryLogger mak
Params()
14-Jan-2002 21:26:06 run = 137021 event = 9993
v DaqInfoSet:chip status error: barrel 0 half
0 phi wedge 2
layer 4 GlobalLibraryLogger SiVrbInfoSet::se
14-Jan-2002 21:26:54 run = 137021 event = 1017

QMon@b0dap63:
erInput Begin processing 74900th record. Run 1370
igger 95889
erInput Begin processing 75000th record. Run 1370
igger 96925
erInput Begin processing 75100th record. Run 1370
igger 98061
erInput Begin processing 75200th record. Run 1370
igger 99090
erInput Begin processing 75300th record. Run 1370
igger 100373
erInput Begin processing 75400th record. Run 1370
igger 101436
erInput Begin processing 75500th record. Run 1370
igger 102551

@b0dap66:
Input Begin processing 40800th record. Run 1370
igger 95907
Input Begin processing 40900th record. Run 1370
igger 97202
Input Begin processing 41000th record. Run 1370
igger 98317
Input Begin processing 41100th record. Run 1370
igger 99419
Input Begin processing 41200th record. Run 1370
igger 100475
Input Begin processing 41300th record. Run 1370
igger 101567
Input Begin processing 41400th record. Run 1370
igger 102650
```


Consumer Status Page

1. Before attach a consumer to HistoDisplay, make sure that the consumer appears on the consumer status page (minimum 10 events).

http://www-cdfonline.fnal.gov/consumer/consumer_status.html

List of Servers

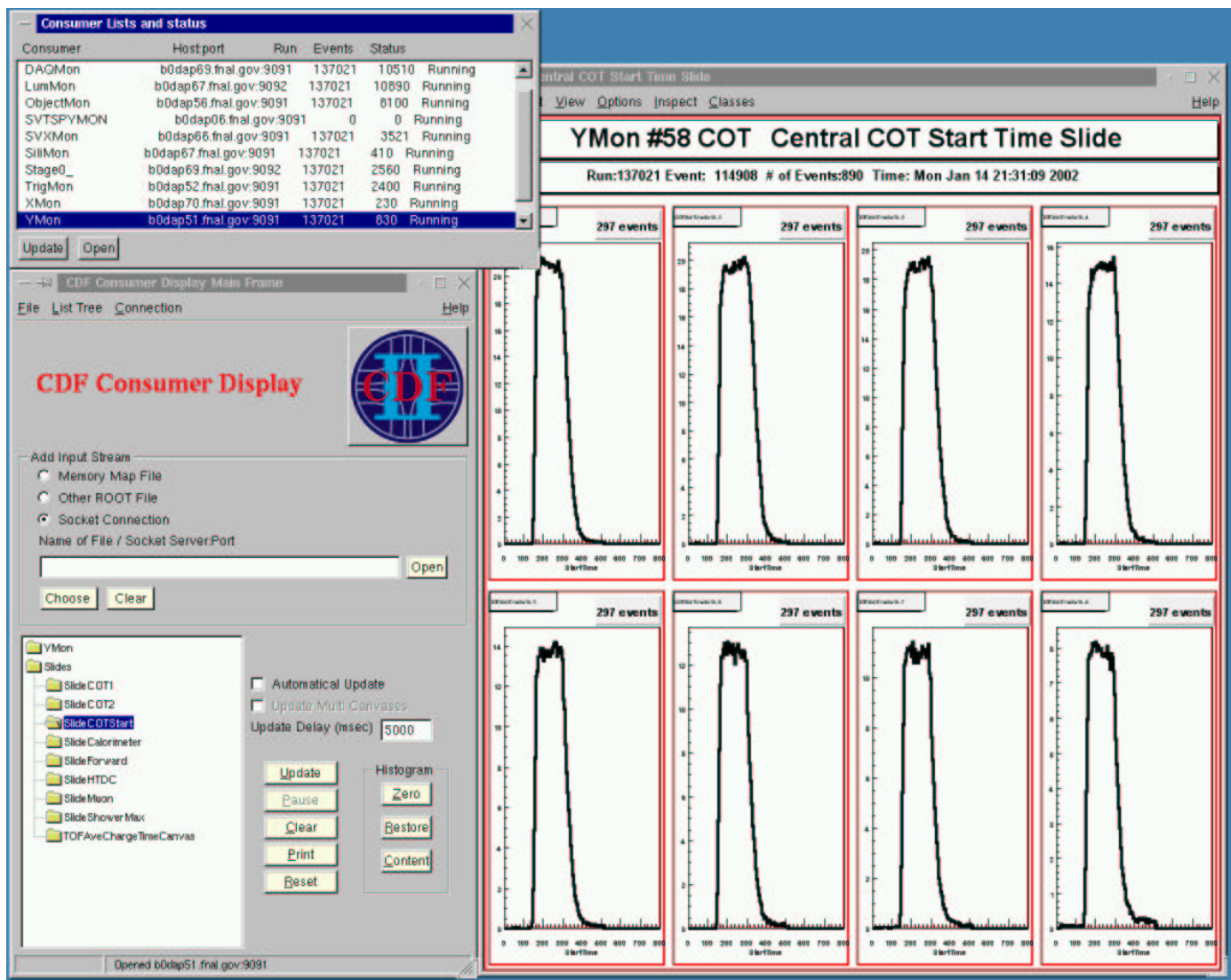
Status of Consumerserver Processes:

Consumer	Hostname	Port	Run number	# of Events processed	Server Status	Time
BeamMon	b0dap66.fnal.gov	9092	137021	9560	Running	Mon Jan 14 21:25:25 2002
DAQMon	b0dap69.fnal.gov	9091	137021	9570	Running	Mon Jan 14 21:24:56 2002
LumMon	b0dap67.fnal.gov	9092	137021	9750	Running	Mon Jan 14 21:25:03 2002
ObjectMon	b0dap56.fnal.gov	9091	137021	7330	Running	Mon Jan 14 21:24:54 2002
SVTSPYMON	b0dap06.fnal.gov	9091	0	0	Running	Mon Jan 14 21:25:30 2002
SVXMon	b0dap66.fnal.gov	9091	137021	3473	Running	Mon Jan 14 21:25:51 2002
SiliMon	b0dap67.fnal.gov	9091	137021	330	Running	Mon Jan 14 21:24:38 2002
Stage0_	b0dap69.fnal.gov	9092	137021	2300	Running	Mon Jan 14 21:25:16 2002
TrigMon	b0dap52.fnal.gov	9091	137021	2030	Running	Mon Jan 14 21:24:50 2002
XMon	b0dap70.fnal.gov	9091	137021	210	Running	Mon Jan 14 21:25:34 2002
YMon	b0dap51.fnal.gov	9091	137021	750	Running	Mon Jan 14 21:24:50 2002
spymon_test	b0dap68a.fnal.gov	9091	0	0	Running	Mon Jan 14 21:24:30 2002

Last Update Mon Jan 14 21:25:51 2002

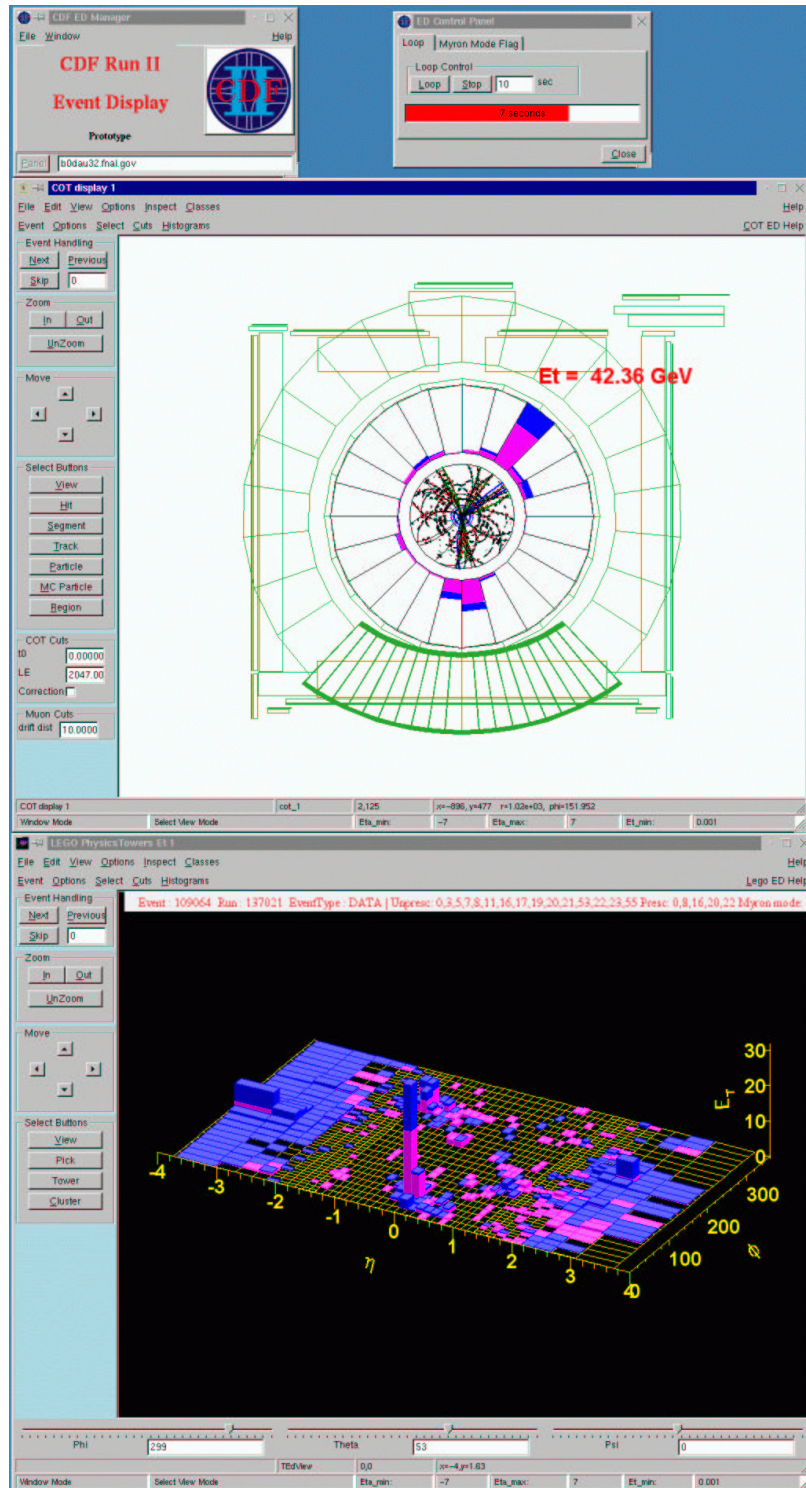
How to start HistoDisplay

1. Go to /cdf/people1/cdfdaq/consumer_scripts directory on b0dap51
2. Type : **./startDisplay.sh All**
3. HistoDisplays appear on top and bottom screens of b0dap52, 55 and 56



How to start Event Display

1. Go to /cdf/people1/cdfdaq/consumer_scripts directory on b0dap50 (left most terminal).
2. Type : `./startEvd.sh < PartitionID >`



Odds and Ends

- Tell the CO the partition ID on which you start taking data. In general, it is a good idea to tell CO when you are starting/stopping a run.
- If you close partition, or restart run_control, one needs to restart all the consumer monitors in order for monitors to receive events from newly started partition. Please notify CO in that case.
- Check “UseLevel3Manager” is enabled in the Run Control. If not, consumers can not start running.

File	Browse	Create	Triggers	DataType	LookArea	Inhibits																								
<div>Expert:</div> <table><tbody><tr><td><input checked="" type="checkbox"/> UseFred</td><td><input type="checkbox"/> UseSrc</td><td><input checked="" type="checkbox"/> UseScaler</td><td><input type="checkbox"/> UseTM</td><td><input checked="" type="checkbox"/> UseLevel3Manager</td><td><input checked="" type="checkbox"/> UseErrorHandler</td></tr><tr><td><input type="checkbox"/> UseSlowControl</td><td><input type="checkbox"/> MyronMode</td><td><input type="checkbox"/> L1Early</td><td><input type="checkbox"/> IgnoreError</td><td><input checked="" type="checkbox"/> IgnoreBusy</td><td><input type="checkbox"/> EnableFP</td></tr><tr><td><input type="checkbox"/> DisableCrates</td><td><input type="checkbox"/> DisableL1Calib</td><td><input type="checkbox"/> StartOnBO</td><td><input type="checkbox"/> Svx396Mode</td><td><input checked="" type="checkbox"/> IgnoreBC</td><td><input type="checkbox"/> LoadQJEFRAM</td></tr><tr><td><input type="checkbox"/> LoadEtAlgo</td><td><input type="checkbox"/> LoadEtTable</td><td><input checked="" type="checkbox"/> LoadDacs</td><td><input checked="" type="checkbox"/> DacFromHdb</td><td></td><td></td></tr></tbody></table>							<input checked="" type="checkbox"/> UseFred	<input type="checkbox"/> UseSrc	<input checked="" type="checkbox"/> UseScaler	<input type="checkbox"/> UseTM	<input checked="" type="checkbox"/> UseLevel3Manager	<input checked="" type="checkbox"/> UseErrorHandler	<input type="checkbox"/> UseSlowControl	<input type="checkbox"/> MyronMode	<input type="checkbox"/> L1Early	<input type="checkbox"/> IgnoreError	<input checked="" type="checkbox"/> IgnoreBusy	<input type="checkbox"/> EnableFP	<input type="checkbox"/> DisableCrates	<input type="checkbox"/> DisableL1Calib	<input type="checkbox"/> StartOnBO	<input type="checkbox"/> Svx396Mode	<input checked="" type="checkbox"/> IgnoreBC	<input type="checkbox"/> LoadQJEFRAM	<input type="checkbox"/> LoadEtAlgo	<input type="checkbox"/> LoadEtTable	<input checked="" type="checkbox"/> LoadDacs	<input checked="" type="checkbox"/> DacFromHdb		
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- Please help out (work with) CO people when you have time.
- Old root files (monitor output files) can be found in /data1/consumer/results/xxxxMon area and older root files can be found in /cdf/cdf-cf-data1/cdf_cf/results/xxxxMon area. One can use the same HistoDisplay GUI as used on online to view these root files.

Odds and Ends. Cont.

- **About SVXMon Auto HRR:**
You will get an alarm from RUN_CONTROL, if you are running with silicon and if SVXMon is not running. Please make sure SVXMon is running in that case.
- **SVXMon does not process any data if silicon is not integrated in data taking. If YMon is not processing events during cosmic run or shot-setup run (even though other monitors seem to be getting events), do not worry. It is probably because it is configured to run “physics” mode and YMon is looking for minimum biased events. In that case, YMon will start processing events when the really physics data taking starts.**
- **When you find any problems in consumer monitors in general, please notify us, consumerframework people:
(send mail to maeshima@fnal.gov,
page:online monitor 266-2705, etc...).**